

REMARKS

I. INTRODUCTION

Claims 1-5, 11, and 12 are pending in the application. The Applicant gratefully acknowledges the indication of allowable subject matter in claim 8. By this Amendment, claim 1 is amended to more particularly recite the features of the linear movement guide and to correct minor informalities. Claims 6-10 are canceled. Claims 2, 11 and 12 stand withdrawn from consideration as being directed to a non-elected species, but are amended herein to correct minor informalities. In view of the foregoing amendments and following remarks, it is respectfully submitted that the application is in condition for allowance. Reconsideration is respectfully requested.

II. CLAIM REJECTIONS UNDER 35 U.S.C. § 112

On pages 2-3 of the Office Action dated April 17, 2007, claims 7 and 9 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. By this Amendment, claims 7 and 9 are canceled, thus rendering the rejection moot. Although some of the features recited previous claims 7 and 9 are now recited in amended claim 1, the Applicant respectfully submits that claim 1 is definite and meets the requirements of the second paragraph of Section 112.

III. CLAIM REJECTIONS UNDER 35 U.S.C. § 103

On pages 3-4 of the Office Action, claims 1, 3-7, 9, and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,615,955 to Namimatsu *et al.* ("Namimatsu") in view of U.S. Patent No. 5,782,135 to Kondo *et al.* ("Kondo"). The rejection is respectfully traversed. Nevertheless, in the interest of expediting prosecution, claim 1 is hereby amended to more particularly recite the features of the linear movement guide. Claims 6, 7, 9, and 10 are hereby canceled. Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 1, as amended, recites:

A linear movement guide for translatable relative
movement of objects to be moved along a guide axis, comprising
a rail on which at least one running surface,
which extends parallel to the guide axis, is provided;

a carriage which comprises at least one loop of roller bodies and a carrying surface,
wherein the loop of roller bodies is a closed loop for the circulation of roller bodies,
wherein, during a relative movement between the carriage and the rail, for the transfer of loads, the roller bodies run through a carrying area defined by the running surface of the rail and the carrying surface of the carriage and are positioned both against the running surface of the rail and against the carrying surface of the carriage, at least essentially free of any organic lubricants,

wherein at least some of the roller bodies comprise two or more different materials with which a core and a zone which surrounds the core are formed, the zone creating an outer contact surface,

wherein the material, of which there is at least one, of the contact surfaces of the roller bodies differs from the material, of which there is at least one, of the running surface of the rail, wherein said zone surrounding the roller bodies comprises a ceramic material, graphite, adamantine carbon, tungsten carbide, titanium carbide, silicon nitride, a chromium compound, tungsten disulphide and/or molybdenum disulphide; and

several separating-elements each of which is arranged between two roller bodies in the loop of roller bodies for preventing any contact between the two respective roller bodies.
(emphasis added).

Thus, claim 1, as amended, requires that "at least some of the roller bodies comprise two or more different materials with which a core and a zone which surrounds the core are formed, the zone creating an outer contact surface." Furthermore, "the material, of which there is at least one, of the contact surfaces of the roller bodies differs from the material, of which there is at least one, of the running surface of the rail" and "said zone surrounding the roller bodies comprises a ceramic material, graphite, adamantine carbon, tungsten carbide, titanium carbide, silicon nitride, a chromium compound, tungsten disulphide and/or molybdenum disulphide." According to the instant disclosure, this arrangement avoids cold welding of the roller body and the rail and allows the linear movement guide to operate essentially free of any organic lubricant. *See e.g.*, pages 5-6 of the instant disclosure.

In contrast, Namimatsu purports to teach "a self-lubrication linear guide apparatus including a guide rail, a slider and a plurality of rolling elements, the apparatus further includes a plurality of lubricant-containing polymer spacer balls which are interposed between the rolling elements inside the slider." Abstract. Balls B are steel (column 4, line 36) and spacer balls B1 are formed of a "lubricant-containing polymer" (column 4, line 50). Importantly, as lubricants, only organic lubricants are proposed. *See* Namimatsu, column 4, lines 50-60. The Office Action acknowledges that Namimatsu fails to teach roller bodies comprising two or more different materials (*see* page 3) as recited in claim 1, but cites Kondo as teaching "load bearing balls being formed of a core metal material and an outer PTFE coating, wherein the coating is different from the material used in forming the ball raceway." Office Action, pages 3-4. It is respectfully submitted, however, that neither one of Namimatsu or Kondo, either alone or in combination, teach at least "said zone surrounding the roller bodies comprises a ceramic material, graphite, adamantine carbon, tungsten carbide, titanium carbide, silicon nitride, a chromium compound, tungsten disulphide and/or molybdenum disulphide" as recited in amended claim 1.

Accordingly, it is respectfully submitted that claim 1 is allowable over the proposed combination of Namimatsu and Kondo. Claims 2-5, 11, and 12, depend from claim 1 and are submitted as being allowable for at least the same reasons. Reconsideration and withdrawal of the rejections are respectfully requested.

On pages 4-5 of the Office Action, claims 1 and 3-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Namimatsu in view of U.S. Patent No. 3,491,423 to Haller. The rejection is respectfully traversed. Nevertheless, in the interest of expediting prosecution, claim 1 is hereby amended to more particularly recite the features of the linear movement guide. Claims 6 and 7 are hereby canceled. Reconsideration and withdrawal of the rejection are respectfully requested.

In addition to the purported teachings of Namimatsu discussed above, Haller is cited on page 4 of the Office Action as teaching "balls being formed of two different materials." Haller, however, appears to teach only "a composite lightweight antifriction bearing ball comprising a spherical core of ceramic alumina, and a hollow spherical shell of sintered powdered steel overlaying and surrounding said core." *See e.g.*, Haller, claim 1. Thus, neither one of Namimatsu or Haller, either alone or in combination, teach at least "said zone surrounding the roller bodies comprises a ceramic

material, graphite, adamantine carbon, tungsten carbide, titanium carbide, silicon nitride, a chromium compound, tungsten disulphide and/or molybdenum disulphide" as recited in amended claim 1.

Accordingly, it is respectfully submitted that claim 1 is allowable over the proposed combination of Namimatsu and Haller. Claims 2-5, 11, and 12, depend from claim 1 and are submitted as being allowable for at least the same reasons. Reconsideration and withdrawal of the rejections are respectfully requested.

IV. CONCLUSION

The Applicant believes that a full and complete reply has been made to the outstanding Office Action and that all of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Accordingly, it is respectfully requested that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. The application is believed to be in condition for allowance.

If the Examiner believes, for any reason, that a personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Prompt and favorable consideration on the merits is respectfully requested.

Respectfully submitted,

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